

# PATENT COOPERATION TREATY

# PCT

## INTERNATIONAL SEARCH REPORT

(PCT Article 18 and Rules 43 and 44)

Applicant's or agent's file reference <b>SILE9PCT</b>	<div style="display: flex; justify-content: space-between;"> <div style="text-align: center;"><b>FOR FURTHER ACTION</b></div> <div style="font-size: small;">see Form PCT/ISA/220 as well as, where applicable, item 5 below.</div> </div>	
International application No. <b>PCT/FI 2004/000224</b>	International filing date ( <i>day/month/year</i> ) <b>13 April 2004</b>	(Earliest) Priority Date ( <i>day/month/year</i> ) <b>11 April 2003</b>
Applicant <b>Silecs Oy et al</b>		

This international search report has been prepared by this International Searching Authority and is transmitted to the applicant according to Article 18. A copy is being transmitted to the International Bureau.

This international search report consists of a total of 7 sheets.

☐ It is also accompanied by a copy of each prior art document cited in this report.

**1. Basis of the report**

a. With regard to the language, the international search was carried out on the basis of the international application in the language in which it was filed, unless otherwise indicated under this item.

☐ The international search was carried out on the basis of a translation of the international application furnished to this Authority (Rule 23.1(b)).

b. ☐ With regard to any nucleotide and/or amino acid sequence disclosed in the international application, see Box No. I.

2. ☒ Certain claims were found unsearchable (see Box No. II)

3. ☒ Unity of invention is lacking (see Box No. III)

4. With regard to the title,

☒ the text is approved as submitted by the applicant.

☐ the text has been established by this Authority to read as follows:

5. With regard to the abstract,

☒ the text is approved as submitted by the applicant.

☐ the text has been established, according to Rule 38.2(b), by this Authority as it appears in Box No. IV. The applicant may, within one month from the date of mailing of this international search report, submit comments to this Authority.

6. With regard to the drawings,

a. the figure of the drawings to be published with the abstract is Figure No. \_\_\_\_\_

☐ as suggested by the applicant.

☐ as selected by this Authority, because the applicant failed to suggest a figure.

☐ as selected by this Authority, because this figure better characterizes the invention.

b. ☐ none of the figures is to be published with the abstract.

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International application No.  
**PCT/FI2004/000224****Box No. II Observations where certain claims were found unsearchable (Continuation of item 2 of first sheet)**

This international search report has not been established in respect of certain claims under Article 17(2)(a) for the following reasons:

1. ☐ Claims Nos.:  
because they relate to subject matter not required to be searched by this Authority, namely:
2. ☒ Claims Nos.: **1**  
because they relate to parts of the international application that do not comply with the prescribed requirements to such an extent that no meaningful international search can be carried out, specifically:  
**see extra sheet**
3. ☐ Claims Nos.:  
because they are dependent claims and are not drafted in accordance with the second and third sentences of Rule 6.4(a).

**Box No. III Observations where unity of invention is lacking (Continuation of item 3 of first sheet)**

This International Searching Authority found multiple inventions in this international application, as follows:

**see extra sheet**

1. ☐ As all required additional search fees were timely paid by the applicant, this international search report covers all searchable claims.
2. ☐ As all searchable claims could be searched without effort justifying an additional fee, this Authority did not invite payment of any additional fee.
3. ☐ As only some of the required additional search fees were timely paid by the applicant, this international search report covers only those claims for which fees were paid, specifically claims Nos.:
4. ☒ No required additional search fees were timely paid by the applicant. Consequently, this international search report is restricted to the invention first mentioned in the claims; it is covered by claims Nos.: **1 - 163**  
**see extra sheet**

**Remark on Protest**

- ☐ The additional search fees were accompanied by the applicant's protest.  
☐ No protest accompanied the payment of additional search fees.

## Box II.2

Present claim 1 relates to an extremely large number of possible compounds. In fact, the claim contains so many options, variables and possible permutations that a lack of clarity within the meaning of Article 6 PCT arises to such an extent as to render a meaningful search of the claims impossible.

Consequently, the search has been carried out for those compounds included in the application which appear to be clear, namely the compounds according to claims 59, 108 and 134.

## Box III

The International Search Authority considers that there are 3 inventions covered by the claims indicated as follows:

I: Claims: 1, 57, 59, 108, 134 and 160 are directed to a chemical compound and a method for making the chemical compound.

II: Claims 1, 10, 29, 41, 52, 53, 59, 68, 85, 99, 103, 104, 108, 113, 122, 127, 129, 130, 134, 139, 148, 153, 155 and 156 are directed to a poly(organo siloxane), an integrated circuit having a layer of poly(organo siloxane) and a computer comprising an integrated circuit with a poly(organo siloxane) layer.

III: Claim 164 is directed to a thin film comprising a composition obtained by hydrolyzing two different monomeric silicon compounds to form a siloxane material.

The ISA has carried out a partial search which relates to invention I mentioned above.

The applicant is invited to pay an additional fee for the inventions II and III as listed above.

Statement:

The present application has been considered to contain 3 inventions which are not linked in a permissible manner as required by PCT Rule 13.1 or 13.2:

See PCT Guidelines § 10.15;

"While a single set of independent claims according to one of the subparagraphs of paragraph 10.12 is always permissible, it does not require the International Authority to accept a plurality of such sets..."

.../...

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Independent claims are permissible for two related articles, in this case a monomer and a polymer, however, it does not follow that, under paragraph 10.12, an applicant may include also, in the one international application, four additional independent claims: two claims for a process for the manufacture of the monomer and four claims for the use of a polymer in the computer industry.

Consequently, the (two) groups of inventions are not so linked as to fulfill the requirements for unity of invention as required by Rule 13.1, 13.2 and 13.3 PCT.

In the present application the invention number III is not linked to either invention I or II.

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## A. CLASSIFICATION OF SUBJECT MATTER

IPC7: C08G 77/20, C08G 77/04, H01B 3/46

According to International Patent Classification (IPC) or to both national classification and IPC

## B. FIELDS SEARCHED

Minimum documentation searched (classification system followed by classification symbols)

IPC7: C08G, H01B

Documentation searched other than minimum documentation to the extent that such documents are included in the fields searched

SE,DK,FI,NO classes as above

Electronic data base consulted during the international search (name of data base and, where practicable, search terms used)

WPI, EPODOC, CAPLUS

## C. DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	STN International, File CAPLUS, CAPLUS accession no. 1975:497451, Document no. 83:97451, Vaks, E.A. et al: "Radiation-chemical synthesis of polyfluoroaromatic derivatives of silicon affected by accelerated electrons", & Zhurnal Obshchei Khimii (1975), 45(6), 1315-22  --	1
X	STN International, file CAPLUS, CAPLUS accession no. 1979:420591, Document no. 91:20591, Novikov, S.S. et al: "Silicon-containing polycyclic hydrocarbons. I. Study of the alkylation of phenylchlorosilanes by 1-bromoadamantane", & Zhurnal Obshchei Khimii (1979), 49(4), 772-5  --	1

☒ Further documents are listed in the continuation of Box C.☒ See patent family annex.

\* Special categories of cited documents:

- "A" document defining the general state of the art which is not considered to be of particular relevance
- "E" earlier application or patent but published on or after the international filing date
- "L" document which may throw doubts on priority claim(s) or which is cited to establish the publication date of another citation or other special reason (as specified)
- "O" document referring to an oral disclosure, use, exhibition or other means
- "P" document published prior to the international filing date but later than the priority date claimed

"T" later document published after the international filing date or priority date and not in conflict with the application but cited to understand the principle or theory underlying the invention

"X" document of particular relevance: the claimed invention cannot be considered novel or cannot be considered to involve an inventive step when the document is taken alone

"Y" document of particular relevance: the claimed invention cannot be considered to involve an inventive step when the document is combined with one or more other such documents, such combination being obvious to a person skilled in the art

"&" document member of the same patent family

Date of the actual completion of the international search

5 October 2004

Date of mailing of the international search report

14 -10- 2004

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## INTERNATIONAL SEARCH REPORT

International application No.

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
X	Journal of the American Chemical Society, volume 91, no 6, 1969, March 12, R.A. Benkeser et al: "A New Method of Forming the Carbon-Silicon Bond. Reductive Silylation of Carbonyl Compounds", pages 1556-1557, see run --	1
X	Acta Chemica Scandinavica, volume 50, 1996, Tamio Hayashi: "Asymmetric Hydrosilylation of Olefins Catalyzed by MOP-Palladium Complexes", pages 259-266, see page 263, no. 14a --	59-60,64
X	US 6348240 B1 (JEFFREY M. CALVERT ET AL), 19 February 2002 (19.02.2002), See ex. 5 and 6 --	59,60,64
A	US 6121340 A (SHICK ET AL), 19 Sept 2000 (19.09.2000) --	1,10,29,41,52,53,59, 68,85,99,103,104, 108,113,122,127, 129,130,134,139, 148,153,155,156
E	US 20040170760 A1 (MEAGLEY ET AL), 2 Sept 2004 (02.09.2004), --	1,10,29,41,52,53,59, 68,85,99,103,104, 108,113,122,127, 129,130,134,139, 148,153,155,156
A	US 20020037442 A1 (GRILL ET AL), 28 March 2002 (28.03.2002), --	1,10,29,41,52,53,59, 68,85,99,103,104, 108,113,122,127, 129,130,134,139, 148,153,155,156
A	US 6242339 B1 (AOI), 5 July 2001 (05.07.2001), --	1,10,29,41,52,53,59, 68,85,99,103,104, 108,113,122,127, 129,130,134,139, 148,153,155,156

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## C (Continuation). DOCUMENTS CONSIDERED TO BE RELEVANT

Category*	Citation of document, with indication, where appropriate, of the relevant passages	Relevant to claim No.
P,A	WO 03059990 A1 (SILECS OY), 24 July 2003 (24.07.2003),  --	1,10,29,41,52,53,59, 68,85,99,103,104, 108,113,122,127, 129,130,134,139, 148,153,155,156
A	WO 03015129 A2 (ADVANCED TECHNOLOGY MATERIAL, INC.), 20 February 2003 (20.02.2003),  -- -----	1,10,29,41,52,53,59, 68,85,99,103,104, 108,113,122,127, 129,130,134,139, 148,153,155,156

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Information on patent family members

03/09/2004

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JP	5202483 A	10/08/1993
US	5389496 A	14/02/1995
US	5500315 A	19/03/1996

US 6121340 A 19/09/2000

AT	215105 T	15/04/2002
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CA	2271382 A	14/05/1998
DE	69711378 D,T	24/10/2002
DK	906588 T	08/07/2002
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TW	492108 B	00/00/0000
US	6312793 B	06/11/2001
US	6437443 B	20/08/2002
US	20020034625 A	21/03/2002

US 6242339 B1 05/07/2001

JP	3305251 B	22/07/2002
JP	11243147 A	07/09/1999
US	6333257 B	25/12/2001
US	6710451 B	23/03/2004
US	20010026019 A	04/10/2001

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US	20030186494 A	02/10/2003
US	20040002617 A	01/01/2004
US	20040012089 A	22/01/2004
WO	03057702 A	17/07/2003
WO	03057703 A	17/07/2003
WO	03063205 A	31/07/2003

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